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THE UNIVERSITY OF TEXAS AT DALLAS

Developments

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MEET OUR TEAM!
Spring 2024

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As caregivers, we naturally speak differently to infants compared to adults. Research has titled this communication infant-directed speech, or IDS. We can characterize and distinguish IDS from adult-directed speech, or ADS, through exaggerated pitch, pauses, and simpler utterances. It has also been shown that infants respond more readily to IDS and absorb information, showcasing better linguistic scores as they develop. A study by Outters et al. (2020) examined the response of infants of two different age groups to IDS and whether the stylistic input from their mothers’ speech varies in correlation to infant attention.

Outters et al. (2020) tested 81 monolingual German infants, 42 of whom were six months of age and 39 of whom were 13 months of age. Examining these two different age groups was relevant to see if or how factors of IDS change over the course of development. The authors studied maternal IDS versus ADS to determine if there were prosodic changes in the mother’s speech depending on the age of their infant. For the preferential listening task, a female speaker was asked to read six short stories, once in IDS and once in ADS. The gaze-following task consisted of audio-visual stimuli (in IDS and ADS) in which a female speaker would fixate on one of the two objects in front of her. Infants’ gaze and fixation on the model, the target, or the distractor object were all recorded parameters for this task.

Authors took the mothers’ voice recordings in IDS and ADS and calculated any prosodic differences between the two conditions as well as between the two age groups. It was perceived that infants from both age groups hear very similar prosodic elements from their mother’s speech in IDS, regardless of whether the mother had a 6-month-old or 13-month-old child. Infant preference for IDS was higher than their preference for ADS only at six months of age in the preferential listening task. However, no preference was found for infants of 13 months of age. This result is likely because the range of stimuli that older infants can process, along with their speed of processing, significantly increases as they develop. For the gaze-following task, the younger and older groups of infants responded longer through fixation when the cue presented was IDS over ADS. This task was the only one that produced significant preference for IDS over ADS for both age groups, which indicated to the authors that IDS and its linguistic elements, such as higher pitch, shorter utterances, and longer vowels, most likely are
more successful at capturing infant attention and directing them to social situations.

When the prosodic differences of maternal versus preferential listening task stimuli IDS and ADS were examined, authors found that infants that responded more readily to IDS, were exposed to maternal IDS of similar quality at home. For 6-month-olds, the influencing prosodic element was increased mean pitch. So when the stimuli’s IDS had a mean pitch similar to that of their mother’s, these infants focused more on the IDS condition. Similarly, shorter utterances was the influencing prosodic factor for 13-month-olds. So when the preferential listening task’s stimuli had shorter utterances in IDS, similar to their mothers’, these infants were more likely to respond to IDS even though it wasn’t a significant outcome. However, when it came to the gaze-following task, there were no significant influences on preference from either age group on the preferential listening task. Maternal IDS prosody characteristics also did not play a significant role in the infants’ preference for IDS in the gaze-following task. Otters et al. (2020) believed this lack of influence to be because the gaze-following task had other prominent social cues that could have directed infant attention to one condition over the other.

This study focused on the 6-month-old’s and 13-month-old’s preferences for IDS over ADS in a preferential listening task and a gaze following task, and whether prosodic differences in maternal IDS impacted infants’ responsiveness in these tasks. Looking at the preferential listening task and the gaze following task, significant differences in 6-month-olds’ responses to IDS over ADS produced significant effects. Looking at just the gaze following task, preference for IDS conditions was not only present in 6-month-olds but also in 13-month-olds. Prosodic differences between IDS and ADS were present, but the maternal IDS condition revealed similar prosodic elements for both age groups. Although within-task differences were not prominent across tasks, differences in preference for IDS over ADS revealed themselves to be due to maternal IDS quality. However, the authors suggest looking more in-depth into this link since the limitations of this study do not allow them to properly decide what other factors could have influenced their results. Thus, this study highlights infants’ preference for IDS over a crucial developmental age range.

Citation:
**LAB ANNOUNCEMENTS**  
**congrats 2024 graduates!**

**Nethra Giri**

Nethra is graduating with a B.S. in Cognitive Science and a minor in Biology. After graduation, she plans to attend medical school and pursue a career working with pediatrics.

**Lasya Manne**

Lasya is graduating with a B.S. in Neuroscience and a minor in psychology. After graduation, she plans to get her master’s in Healthcare Leadership and Management at UT Dallas. Then, she plans to attend P.A. school and work as a physician’s assistant.

**THANK YOU!**

to Nethra and Lasya

Nethra and Lasya have both been part of the Infant Learning Project since Fall of 2021. We are so grateful for their contributions to the lab. We can’t wait to hear about all the wonderful things they do!
CURRENT STUDIES
Spring 2024

This semester, our lab is conducting two online studies.
- Infant Response to Faces and Speech
- Infants' Perception of Humor

FUTURE STUDIES...

To participate in future studies, fill out our interest form!

URSA AWARDS
Congratulations Isha!

Congratulations to Isha Rojanala for being awarded an Undergraduate Scholar Research Award. She presented her research, titled "Acoustic Properties of Infant-Directed Speech and Song," in the April poster session.
PARTICIPANTS NEEDED!

HELP US LEARN MORE ABOUT HOW BABIES DEVELOP LANGUAGE-LEARNING SKILLS

This study aims to understand if infants can recognize the difference between baby talk and adult talk AND if both auditory and visual components are needed to differentiate the two types of speech.

THIS STUDY IS OPEN TO 4–5–, AND 7–MONTH–OLD–INFANTS!

VISIT
https://lookit.mit.edu/studies/ef8f23fc-43f1-4ae0-9964-932bbc332e24/

SCAN FOR STUDY LINK

For more information, contact the Infant Learning Project (infantlearningproject@utdallas.edu)
UT DALLAS
Infant Learning Project

Participants Needed!

HELP US LEARN MORE ABOUT INFANTS’ PERCEPTION OF HUMOR

IN THIS STUDY, WE’RE INTERESTED IN STUDYING HOW BABIES PERCEIVE HUMOR AND SOCIAL INTERACTIONS BETWEEN OTHERS. YOUR BABY WILL BE EXPOSED TO COMBINATION OF VIDEO STIMULI INVOLVING SOCIAL INTERACTION BETWEEN RESEARCHERS

INFANTS BETWEEN 5 AND 10 MONTHS OLD ARE ELIGIBLE TO PARTICIPATE IN THIS STUDY.

Please visit
https://lookit.mit.edu/studies/c3f6561f-8171-4fb7-aa63-c935337ce67b/

Scan for study link

FOR MORE INFORMATION, CONTACT THE INFANT LEARNING PROJECT LAB AT INFANTLEARNINGPROJECT@UTDALLAS.EDU
Dr. Su examines the impact of infant-directed speech (IDS) on language development in autistic and bilingual children, exploring whether the facilitative effects observed in typically developing monolingual children extend to diverse linguistic and clinical groups.

Dr. Wright discusses active, playful learning (APL) in early-grade classrooms, focusing on a pilot study by Southern Methodist University’s CORE and Dallas ISD, outlining the framework, practices, and the importance of their research partnership in initiating the project.

Dr. Ruggero’s presentation highlights stark health disparities in the Dallas-Ft. Worth Metroplex, particularly in behavioral health. It emphasizes the pressing determinants and proposes solutions through a psychological clinical science workforce to address the regression in progress.
Play with Me (Juega Conmigo)

Play with Me (Juega Conmigo) is a bilingual 10-12 week program held three times a year, designed to enhance parent-child relationships and foster children’s healthy development through structured play sessions using toys, music, and movement.

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The Grow With Me (Crece Conmigo)

The Grow With Me (Crece Conmigo) program offers free developmental screenings, guidance, and intervention referrals for children ages 0-5, serving as a resource for identifying and preventing developmental disorders.

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Dr. Candice Mills from UT Dallas is one of six scientists from six universities who joined forces to launch the Children Helping Science project. This website has studies you and your child can participate in from your home. There are studies for all families, and each study indicates the age range or other criteria for participation, so you can find the perfect one for your child to help science.

Your family can contribute to research about how children learn by doing fun activities together right in your web browser. You can participate with your child from any computer with a webcam.

Visit https://lookit.mit.edu/ to get started!